REMARKS

Favorable reconsideration of this application is requested in view of the following remarks. Minor, editorial revisions have been made in claims 19 and 21.

Claim Objections

Claims 19 and 20 have been objected to because the number of the claim as recited in claim 19, line 7, was missing. Claim 19 has been corrected accordingly, and refers to allowable claims 1, 7 and 12.

Claim Rejections - 35 USC § 102

Claims 21, 23, 24, and 28 have been rejected under 35 U.S.C. 102(b) as being anticipated by Yagi (US 5,808,999). Applicants respectfully traverse this rejection.

In the invention of claim 21, an objective lens for an optical disk comprises at least one surface that is divided into at least three regions by concentric circles having an optical axis as a center. The three regions include a first region including the optical axis and an outer second region, the two regions being rotationally symmetric aspheric surfaces. A third region is sandwiched by the first region and the second region. The third region is a toric surface having the optical axis as an axis of rotation and is in contact with the second region and intersects the first region.

Page 4 of the Office Action, paragraph 7, states thatYagi shows an objective lens having a third region that is sandwiched by a first region located at an innermost part and a second region located at the outermost part of the objective lens, wherein the third region has a toric surface that is in contact with the second region and intersects the first region.

Applicants respectfully disagree with the rejection's characterization of the Yagi disclosure. Fig. 4(A) will be used as a representative example out of Figs. 1, 2A, 3A, 4A, 5A, 5B and 8 to refer to the disclosure of Yagi.

Referring to Fig. 4(A) of Yagi, the region characterized by the Office Action as being the first region in Fig. 4(A) actually includes a section that has apparently different optical characteristics from the first region. This section is illustrated as the region where the dotted line

and the solid line are dissociated from each other in Fig. 4(A). As shown in the spherical aberration diagram of Fig. 4(B), the region where the dotted line and the solid line are dissociated from each other is located lower than NA3 and has a spherical aberration curve that is away from the vertical axis. Thus, as indicated by the spherical aberration diagram of Fig. 4(B), the section where the dotted line and solid line are dissociated from each other has different optical characteristics from that of the first region and is in fact a toric surface. Consequently, the objective lens (31) shown in Fig. 4 of Yagi includes a first toric surface located between the first region and the second region so that it is in contact with the first region and a second toric surface that is located between the first region and the second region so that it is in contact with the second region. As shown, the first toric surface intersects the second toric surface. This configuration seen in Fig. 4(A) of Yagi is common to all those disclosed in the other figures, except for the configuration in Fig. 3(A). In Fig. 3(A), Yagi does not show the toric surface intersecting the first region.

Therefore, Yagi does not disclose the objective lens configuration recited in claim 21.

The difference between the configuration if the objective lens of claim 21 and that of Yagi also can be considered in another way. Because of the configuration of the objective lens as recited in claim 21, if the aspheric surface curve of the first region and the aspheric surface curve of the second region are extended, respectively, toward each other, the two curves would not intersect and a difference D in level as shown in Fig. 22 of the present application would be formed. In sharp contrast, in the configurations of Figs. 1, 2, 3, 4, 5 and 8 of Yagi, if the aspheric surface curve of the inner circumference region and the aspheric surface curve of the outer outer circumference region are extended, respectively, toward each other, the two curves would connect, without providing a difference in level (see the dotted lines 313 in each figure of Yagi).

Therefore, in the configuration of claim 21, one toric surface that is in contact with the second region would intersect the first region. In Yagi, the only toric surface that is in contact with the second region would not intersect the first region. A second toric region would be needed in Yagi's objective lens since there is not a difference in level between the aspheric surface curve of the inner circumference region and the aspheric surface curve of the outer

circumference region.

Therefore, Yagi (US 5,808,999) fails to disclose or suggest all of the elements set forth in claim 21, and for at least this reason claim 21 is believed to be patentable over Yagi.

Claims 23, 24 and 28 are believed to be patentable for at least the same reasons specified with respect to claim 21.

In view of the above, favorable reconsideration in the form of a Notice of Allowance is requested.

Respectfully submitted,

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